DOCUMENT RESUME

ED 459 646 HE 034 535

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TITLE Improving the Quality of Tertiary Education through Student Evaluation of Teaching.
PUB DATE 2001-04-00
NOTE 6p.; Paper presented at the Annual Meeting of the Joint Committee for Tertiary Education (10th, Kingston, Jamaica, April 2001).
PUB TYPE Reports - Descriptive (141) -- Speeches/Meeting Papers (150)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Educational Quality; *Evaluation Methods; Foreign Countries; *Higher Education; Quality Control; *Student Evaluation of Teacher Performance; *Teacher Effectiveness
IDENTIFIERS *Curriculum Alignment

ABSTRACT

This paper explores the use of student evaluation of teaching (SET) as part of the quality assurance cycle and suggests an alternative approach to evaluate the provision of teaching in tertiary institutions. SETs usually involve questionnaires that ask students anonymously to rate the quality of teaching on a 4- or 5-point scale. SETs have been used in universities for more than 30 years to assess the quality of teaching, but the use of SET instruments had often been accompanied by counter-productive effects. Using them for proportion and tenure decisions had contributed to the lowering of academic standards. An alignment method of teacher evaluation yields better results. The alignment method considers skills, understanding, and attitudes, and whether the current state of these change attributes is closely aligned with the ideal state. Aligning changes expected by the lecturer with changes expected by the students results in improved teaching, and the evaluation of the alignment serves as an indicator of teacher effectiveness. (SLD)

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Improving the Quality of Tertiary Education Through Student Evaluation of Teaching

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Improving the Quality of Tertiary Education Through Student Evaluation of Teaching

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This paper evaluates the use of Student Evaluations of Teaching (SETs) as part of the Quality Assurance Cycle, finds this instrument to be inappropriate and suggests an alternative instrument to evaluate the provision of teaching in tertiary institutions.

Figure 1: The Quality Assurance Cycle using Student Evaluation of Teaching (SETs)

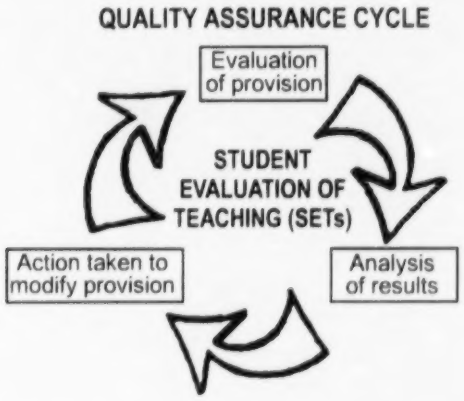

Figure 1 illustrates the Quality Assurance Cycle for evaluating institutional provisions. Where that provision is Teaching, it is common to use SETs as the main evaluative instrument. These instruments are usually questionnaires that ask students to anonymously rate the quality of teaching on a 4 or 5 point Likert scale from strongly disagree to strongly agree. Apart from the on-going Quality Assurance Cycle it is occasionally necessary to take a Quality Audit of the Quality Assurance procedures themselves in order to ensure that these procedures continue to be effective. This paper contributes to the Quality Audit of the SET procedure for assessing teaching provision.

SETs have been used in universities for more than thirty years to assess the quality of teaching and as an indicator of successful teaching for promotion and tenure decisions. Unfortunately, their use has been accompanied by many counter- productive effects such as discouraging innovation, and deterring instructors from challenging students (Damron, 1995; Murray, 1984; Ruskai, 1996). Although their outcomes are intended to improve teaching, a major negative effect of also using them for promotion and tenure decisions has been to contribute to the lowering of academic standards. In the copious literature on the subject, this effect is referred to as 'grade inflation' or 'dumbing down courses' and some universities who use SETs now make statistical adjustments for these effects (Gillmore, & Greenwald, 1999). SETs have become known as little more than 'smile sheets' measuring popularity and 'customer satisfaction' (Altschuler, 1999), and lecturers have developed many methods for improving their SET scores that do not necessary improve teaching (Crumbley, 1995). Its seems that one reason SETs continue to be used is that there has not been an expedient alternative. This paper introduces such an alternative - an alignment method.

Bastick, T. (2001, April). *Improving the Quality of Tertiary Education Through Student Evaluation of Teaching.* Paper presented at the 10th annual conference of the Joint Committee for Tertiary Education (JCTE), Kingston, Jamaica, West Indies.

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Alignment method of assessment

Many psychometric instruments use what I call 'alignment methods'. In an alignment method a respondent's current state is assessed and his/her ideal state is also assessed on the same indicators. The difference between the current and ideal states is the alignment. Where the difference is large, there is poor alignment which is indicative of problems. Where the difference is small, alignment is good which indicates that the current state is close to the ideal. Improved alignment can also be used as a measure of successful intervention strategies. What is crucial to the alignment method is the choice of indicators measured to assess the current and ideal states. In tertiary education there are three change attributes that are emphasized in quality teaching and learning. These are Skills, Understanding and Attitudes operationally defined as:

1. Skills – learning of facts/processes. Assessed by speedy accurate reproduction.
2. Understanding – professional competence. Assessed by justification of novel application.
3. Attitudes – professional values. Assessed by demonstration.

The alignment method uses these three indicators. It should be noted that critical thinking is promoted by teaching and assessment of professional competence. This is because there are no right/wrong answers and only justifications are assessed. Alignment is not based on the course objectives. Course objectives and content are used as vehicles for emphasising the desired degrees of Skills, Understanding and Attitudes. This emphasis will vary according to the course level and culture of the subject taught.

What are aligned are 'changes expected by the lecturer' and 'changes expected by the students' in each of these three attributes. Numerically stated: Alignment = changes expected by Lecturer - changes expected by students. Zero is the perfect score, the theory being that students achieve higher standards if they and their lecturer are working towards the same changes. The following Figure 2 shows the seven core questions that the lecturer and each student answers for the alignment to be calculated.

Figure 2: Five minute assessment form

Course Assessment - Skills, Competence and Attitudes

	As it **is now** on this course	As it **should be** on this course	
(i) Emphasis on Skills *(getting it right)*	☐ Your estimate out of 100	☐ Your estimate out of 100	*Write a Number in each box*
(ii) Emphasis on Competence *(knowing why)*	☐ Your estimate out of 100	☐ Your estimate out of 100	*Write a Number in each box*
(iii) Emphasis on Attitudes *(relevance to your life)*	☐ Your estimate out of 100	☐ Your estimate out of 100	*Write a Number in each box*

How much so far have you enjoyed your experience of the teaching on this course? ☐ Your estimate out of 100 *Write a Number in the box*

These forms are confidential, not anonymous. In fact, students have to pass a test when they enroll so as to earn the right to be considered as informed assessors. Individual's alignments can be grouped to assess the mean alignment of any group of interest - males v females, experienced v novice students, older v younger, option 1 v option 2 students, etc.

Two alignment scores are calculated:

- Alignment of Scope (changes in absolute quantity) and
- Alignment of Proportions (changes in relative quantity)

However, these formative alignment indicators, that are measured during the course, are only predictors of quality teaching. They are not the criteria of quality teaching. The two accepted summative criteria of quality teaching are:

- Academic standards and
- Enjoyment of learning

Continued validation of the theory

When the courses are over and the academic results are compared with the alignment scores, it is possible to validate the theory for each course, and for each group of students taking each course.

- Alignment of Scope correlates with Academic standards and
- Alignment of Proportions correlates with Enjoyment of learning

Further, when the course has finished it is possible to use sensitivity analyses on the data to calculate those lecturer's changes that would have most aligned the teaching and thus maximized the academic results and enjoyment of the students. It is seen from actual alignment data that having chosen these perferred changes would have increased the correlations between alignment and academic standards, thus futher validating the theory that alignments are predictors of quality teaching.

Optimization of teaching

Traditional SETs are a 'post mortem' assessment, collected at the end of the course when it is too late to feedback to help the students who made the assessments. However, a lecturer does not have to wait until the course is over to optimize teaching using the alignment method. The data collected in-course can be processed by the same type of sensitivity analysis to calculate the optimum changes that should be made by the lecturer to maximize the students post-course academic attainment and/or course enjoyment.

Administrative Decision point assessment of quality teaching

The lecturer may utilize the five-minute alignment form many times during the course to keep teaching on track. The administration uses it just once near the end of the course to calculate the final alignment score for that lecturer's quality of teaching. This results in a single decision point number that can be compared across the institution and used for promotion and tenure decisions.

Discussion

This paper has only touched on the classroom assessment use of the Alignment Method. It has not discussed the staff and course development aspects of the method or the many benefits the method offers for Quality Assurance compared to traditional SETs.

This alignment method of assessing teaching quality offers 10 main benefits:

1 It identifies the quality of teaching experienced by each individual student.

2 It can be used to identify groups of students that might be disadvantaged by the teaching.

3 It offers detailed diagnostic reports to help the lecturer.

4 It only takes 5 minutes to administer and the analysis is quick and low-cost.

5 It can be given several times in-course resulting in optimum recommendations to keep teaching on track.

6 It is sensitive to criteria considered important in different subject areas and by different Faculties and levels of students.

7 It maintains lecturer/student trust and promotes higher quality teaching and higher quality learning.

8 It protects academic freedom, is non-threatening and has built in protection for Faculty who teach intransigent students and difficult courses.

9 It uses one standard form and gives one single decision-point number that can be used in institutional evaluations for comparing quality of teaching across the university e.g. for Quality Audits, teaching awards and for promotion and tenure decisions.

10 Post-course correlations with academic standards evidence the reliability and validity of the instrument for each course and for subgroups of students taking each course on which it is used.

This alignment method can be flexibly piloted at different levels within an institution - at the level of full institutional evaluation, at the level of staff and course development within Faculties, Schools or Departments and at the level of individual lecturers who are interested in improving the quality of their own teaching for their own students. Web-based Alignment software is now being developed that will enable lecturers and administrators from tertiary institutions world-wide to avail themselves of the benefits of using the alignment method in their own Quality Assurance Cycles.

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